

Assignment 1

DISCRETE STRUCTURES, COE 251

1.

(c) There are no beautiful sceneries in Ghana.

The truth value: *False*.

(e) The moon is made of green cheese.

The truth value: it may be *possibly true*.

2.

a. Two

b. Two

c. Four

d. Four

e. Eight

Truth table for a. and b.

p	$\neg p$	$p \rightarrow \neg p$	$p \leftrightarrow \neg p$
T	F	F	F
F	T	T	F

Truth table for c. and d.

p	q	$P \wedge q$	$P \vee q$	$p \oplus (P \vee q)$	$(P \wedge q) \rightarrow (P \vee q)$
T	T	T	T	'F	T
T	F	F	T	F	T
F	T	F	T	T	T
F	F	F	F	F	T

Truth table for e.

p	q	r	$\neg r$	$p \wedge q$	$(p \wedge q) \vee \neg r$
T	T	T	F	T	T
T	T	F	T	T	T
T	F	T	F	F	F
T	F	F	T	F	T
F	T	T	F	F	F
F	T	F	T	F	T
F	F	T	F	F	F
F	F	F	T	F	T